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| 10/549,243 | 09/12/2005 | Yoshikuni Sasaki | 03045PCT | 2418 |
| 23165 7590 03/17/2008 ROBERT J JACOBSON PA 650 BRIMHALL STREET SOUTH ST PAUL, MN 551161511 | | | | |
| EXAMINER | | | | |
| ZIMMER, MARC S | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/549,243

Applicant(s)

SASAKI ET AL.

Examiner

MARC S. ZIMMER

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CIS-100)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 12/06/07.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. Claim 5, like claim 1, recites a product in terms of the preparative method employed to make said product. The organic polymer framework is said to be a product of an emulsified monomer having been absorbed into a polysiloxane particle but the Examiner submits that no such framework exists until such time as polymerization of the polymerizable monomer is carried out.

Claim 13 purports to disclose a resin composition. The resin composition is disclosed as having been obtained by laminating/coating a transparent binder resin and additive onto a surface. However, these steps clearly constitute a means of using said composition, not making said composition. Hence claim 13 actually seems to be directed to a coated substrate with the composition of claim 7 representing a coating layer of the coated substrate. Correction is required.

Claim Analysis

It is Applicant's contention that with their amendment to claim 1, the product of this and its dependent claims are now distinguished over the prior art. The Examiner respectfully disagrees. The newly-added subject matter, in my estimation, does nothing more than unnecessarily reinforce the fact that Applicant endeavors to make their product in an aqueous medium using a vinyl monomer in emulsified form.

It had been contemplated that Applicant might just claim an emulsion containing the product but it is recognized after reviewing the Specification that the product does not exist as oily particles in an aqueous host. Indeed, the Examples indicate that the product precipitates upon being formed, which Applicant refers to as spontaneous sedimentation.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-5, 7, and 10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kukumoto et al., JP 9-12855.

To reiterate, the additional subject matter added to the preamble of claim 1 does not serve to limit the scope of the product claimed. As for claims 7 and 10, the IPN derived from the polyorganosiloxane and methacrylic polymer is blended into polycarbonates based on bisphenols, which have documented optical properties.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sakai et al., U.S. Patent Nos. 5,580,619 and 5,503,932.

It is Applicant's contention that the Examiner is incorrect in stating that the mere act of mixing a vinyl monomer with the polysiloxane would lead to the absorption of the former by the latter. They point to paragraph [0069] of their Specification where it is said that emulsification of the vinyl monomer is performed prior to adding it to the polysiloxane particles because doing so facilitates a more efficient uptake of the monomer by the particles.

The Examiner submits that emulsification is necessary for absorption in the method envisaged by Applicant because the vinyl monomer is insoluble in the aqueous medium in which the polysiloxane is dispersed. However, the vinyl monomer is not added to an aqueous dispersion of the polysiloxane in the approach disclosed by Sakai hence there is no need to emulsify said monomer as the polysiloxane and vinyl monomer exist in a single phase. Again, it is not essential that the emulsification step

be taught by the prior art insofar as this is a process step within the context of a product-by-process claim.

Applicants have not furnished any evidence that the products obtained by the two disparate processes are, in fact, different.

Claims 1-11, and 13-14 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kuramoto et al., JP 2003-82045.

It is Applicant's contention that the product of claims 1 and 5 is to be distinguished from that of the prior art at least because there is no mention that the vinyl monomer has been absorbed into the polysiloxane particle. It is further noted that, though paragraph [0054] mentions the incorporation of a surfactant into the aqueous system comprising the polysiloxane particles, there is nothing that would suggest that the surfactant fulfils the role of emulsifier for the vinyl monomer. Indeed, they point out, the reference does not exactly define the role of the surfactant at all.

It is the Examiner's position that, because the addition of a surfactant is mentioned in the context of preparing the organic polymer component, the skilled artisan will appreciate that its purpose is to promote the formation of a stable bi-phasic system in which the growth of the vinyl polymer in the presence of the silicone component may be facilitated. In fact, given that the objective of the prior art invention is the creation of inorganic-organic polymer particles, the Examiner is uncertain what other function the surface-active agent might be expected to perform, if not to create an

environment in which the vinyl monomer and silicone component are brought together such that the target polymer particles are produced.

The limitations of claim 8 appear to be satisfied by the teachings in paragraph [0040].

Concerning claims 11 and 14, a light diffusing sheet is contemplated in paragraph [0042]. As for claims 2 and 7, since the defined function of the particles is that of a light diffusion agent, it may be properly assumed that the film-forming resin with which it is mixed is transparent because, were the resin not transparent, there ostensibly would not be a need for light-diffusing particles.

The shape of the particles is not explicitly characterized by the reference. In instances such as these, it is the Examiner's position that a spherical shape may be assumed as the shape is usually only identified in those cases where the particle acquires a geometry other than spherical.

Allowable Subject Matter

Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As an aside, it appears at first glance that one or more of the references cited in Applicant's IDS dated December 6, 2007 may anticipate one or more of the instant claims, particularly those directed to the additive. Insofar as they do not appear to be

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relevant to any more claims than are those documents already of record, their applicability will not be evaluated herein in the name of brevity.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARC S. ZIMMER whose telephone number is (571)272-1096. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 10, 2008

/Marc S. Zimmer/
Primary Examiner, Art Unit 1796